



POLICY RECOMMENDATIONS BOOKLET

Breaking Barriers and Building Community for an Effective, Sustainable and Inclusive
Digitalization of Adult Education Services





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List of Abbreviation

Abbreviation	Description
CDAP	Community Development Action Plan
DB+	DigiBreaker+
EEA	European Education Area
EPSR	European Pillar of Social Rights
ESF+	European Social Fund Plus
EU	European Union
NC	National Contribution
PR	Pilot Report
PRB	Policy Recommendation Booklet



Introduction

In an era of rapid digitalisation across Europe, the incapacity to integrate digital tools into daily practice poses a significant risk for both unemployed individuals and counsellors. Likewise, Covid-19 has exacerbated the problem of social exclusion, particularly for those facing job loss and unemployment. In this landscape, another important point to highlight is the green transition affecting the labour market. This transition has the potential to develop greener economic activity across various sectors, involving both unskilled and skilled workers, provided that they receive targeted training for reskilling and up-skilling. To address these pressing issues, community development plays a key role in recognising and promoting the actions of individuals and communities affected by the social exclusion caused by the digital and green transitions. According to **CEDEFOP (2019)**, one key question to address in order to ensure coherence and progress in guidance support is the lack of consistent dissemination of best practices in e-guidance at the European level.

The DigiBreaker+ Project

The DigiBreaker+ project aims to develop a comprehensive solution to create new career opportunities for unemployed adults through a strategy that focuses on expanding the use of digital and green guidance services, and embedding them in local communities to create a ripple effect both in the participating countries and across Europe. The project is based on a methodology that was supported by the Community Development Action Plan (CDAP), which has served as a roadmap for the full use of the DigiBreaker+ (DB+) approach. It has helped trainers, operators and counsellors to integrate this methodology into their daily work, while also promoting its adoption in local learning centres, libraries and communities. The CDAP piloted courses have combined MOOC materials developed by the DB+ consortium with hands-on laboratory activities, in order to help participants apply their knowledge in a practical setting. The outcome of these national pilots, together with an analysis of the EU framework for adult learning and the national contribution on existing policies implemented by the five member countries of the DB+ consortium, has led to the production of the Policy Recommendations Booklet; this document does not aim to provide a one-size-fits-all solution for all countries. Rather, it aims to outline key principles to be taken into account when reforming the support system for enterprises providing guidance and counselling services.



Objectives and main results

The objective of this Policy Recommendations Booklet is to facilitate the transfer and up-scaling of the DigiBreaker+ project results to organisations outside the project's consortium, including stakeholders and policy makers. In order to achieve these objectives, this Policy Recommendations Booklet presents a comprehensive set of European-level policies focusing on adult education, improving green and digital skills and supporting re-employment initiatives. In addition, the National Contributions provide a detailed analysis of how the five countries participating in the DigiBreakers+ project are implementing strategies to improve the employability of unemployed individuals in the labour market. Another core component for the development of this paper are the pilot reports from the implementation of the DB+ methodology: these activities aimed to improve employability, increase participant engagement and validate the effectiveness of the educational tools used, such as the e-book, the MOOC and the Good Practices Handbook. These tools are key components of the methodology, and have been tested and evaluated in four countries - Belgium, Bulgaria, Italy and Sweden - involving both trainers and unemployed adults.

EU policies on Adult Education

The European Union (EU) has made significant efforts to improve adult education, seeing it as a key to keeping up with the rapid changes in today's world. A major focus is on preparing adults for two big shifts: the move towards a greener, more sustainable economy and the growing impact of digital technologies. Workers need to gain new skills to stay relevant in the labour market as industries change to meet green and digital goals. EU policies on adult education aim to provide adults with the skill sets they need to succeed in these areas, while developing their capacity to be competent citizens for both the present and the future of the EU.

One of the main frameworks guiding adult education in the EU is the **European Skills Agenda**. Launched in 2020, this Agenda outlines key objectives for enhancing lifelong learning and skills among adults across Europe. One of its main targets is to ensure that 60% of adults participate in training every year by 2030. This focus on continuous training aims to support workers to adapt to new jobs and industries, particularly considering automation and the green economy.



Closely related to the European Skills Agenda is the **Council Resolution on a New European Agenda for Adult Learning**. Both frameworks share the target of having 60% of the adult population participate in training each year by 2030. The initiatives support each other by promoting lifelong learning and upskilling, ensuring a coherent approach to improving skills in Europe, but the Council Resolution on a New European Agenda for Adult Learning focuses specifically on adult learning policy. This resolution emphasises the need for formal, non-formal and informal learning opportunities to equip adults with the skills and competencies needed for the labour market and active citizenship, and calls for new approaches to achieve these goals.

The **European Pillar of Social Rights (EPSR)** is a guiding framework based on 20 principles which are grouped into three main categories: the first category relates to equal opportunities and access to the labour market, the second to fair working conditions and the third to social protection and inclusion. Its aim is to ensure fair and well-functioning labour markets and welfare systems in all European countries. Of particular relevance to DB+ project goals, the principles that link the green and digital transitions are:

- **Principle 1: Education, training and lifelong learning** – the EPSR highlights the right to quality and inclusive education, training and lifelong learning. This is in line with the European Skills Agenda and the Digital Education Action Plan, which aim to up-skill and re-skill adults for the green and digital economy.
- **Principle 4: Active support for employment** – the EPSR's focus on active support for employment is reflected in adult learning policies which aim to increase participation in lifelong learning.
- **Principle 5: Secure and adaptable working environment** – the EPSR promotes adaptable and secure employment, which is supported by the European Social Fund Plus (ESF+).
- **Principle 20: Access to essential services** – this principle supports the Council recommendation on Upskilling Pathways, which provide opportunities for adults to improve their skills.



The EU has launched a transformative process in which society simultaneously embraces digital innovation and environmental sustainability. This dual approach is called **the Twin Green and Digital Transition**, which aims to create a future where technology and environmental responsibility go hand in hand.

The **GreenComp Framework**, which defines the essential competences for individuals to engage in sustainable practices, and **DigComp**, which outlines the key competences needed to succeed in a digital society, are worthy of mention.

The **GreenComp framework** emphasises the integration of green skills into adult education programmes, to ensure that learners can proactively support the green transition. This framework is crucial for adult education in Europe as it promotes sustainability and improves employability and, in practical terms, it supports curriculum development by providing a structure for the integration of green competences. This structure guides the creation of training programmes and workshops focused on sustainability, ensuring that adult learners acquire the necessary skills. Additionally, it provides tools for assessing and evaluating these competencies to verify that learners meet the required standards.

DigComp is a framework developed by the European Commission to improve digital literacy across Europe. In relation to adult education, it emphasises the importance of lifelong learning, helping adults to stay relevant in the ever-evolving digital landscape and encourages them to engage in continuous learning through online courses, workshops and self-study to improve their digital literacy and their skill sets.

Key to adult learning is the **Digital Education Action Plan** which also aims to improve digital learning across Europe, focusing on improving digital skills and infrastructure. It emphasises the need for lifelong learning opportunities to help adults adapt to the digital age, including access to online courses, digital literacy programmes and training in new technologies. The plan also highlights the importance of green skills, which are essential for the transition to a sustainable economy: adults will be encouraged to learn about renewable energy, sustainable practices and eco-friendly technologies to ensure they can contribute to a greener future.



Another EU measure aimed at helping adults with low levels of skills, knowledge and competences is the **Council Recommendation on Upskilling Pathway**, which provides flexible opportunities to improve literacy, numeracy and digital skills. The initiative targets adults who are not eligible for support under the Youth Guarantee and includes three key steps: skills assessment, tailored learning provision and validation and recognition of the skills required. The main objective of this recommendation is to provide opportunities to progress towards higher qualifications relevant to the labour market and active participation in society.

Finally, it is important to mention how the EU provides funding for all programmes to enhance lifelong learning and skills development: the **European Social Fund Plus (ESF+)** is the main financial instrument designed to support social inclusion, employment and education in Europe. In the context of adult education, this instrument plays a crucial role in supporting initiatives that provide training in digital literacy, vocational skills for personal and professional growth. Additionally, the ESF+ has a focus in promoting green skills in adult education, and so it contributes to boost a more sustainable economy by enhancing the workforce's environmental consciousness.

National Policies on Adult Education

This section of the document examines the policies implemented by the five member countries of the DB+ consortium, based on the NC provided by each partner responsible for the information. The aim is to highlight existing national policies and good practices in adult education and to analyse how they operate in each country that has adopted them.

Belgium

Outline of Adult education policy and importance of adult education and employment support

The Belgian education system is divided into three regions, each with distinct policies and programmes for adult education, provided in the language of the community in question, with the exception of the three competences which remained a federal matter: the determination of the beginning and the end of compulsory education, the minimum requirements for the issuing of diplomas, and the regulation of retirement for employees in the educational system.



The Flemish Community's Decree on Adult Education, originally adopted in 2007 and updated in 2013, plays an important role in structuring adult education. This decree regulates the organisation of Adult Education Centres and emphasises the provision of flexible learning pathways in line with the broader objective of lifelong learning. It supports the professional development of educators and ensures that adult basic education is comparable to primary and secondary education levels in compulsory education. In the Flemish Community, adult education is administered by Centers for Adult Education and Centers for Basic Education, focusing on lifelong learning, vocational training, and personal development. In the French-speaking community adult education policies are laid out in the Decree of 17 July 2003 on Associative Action in Further Education, which defines the scope of continuing education and sets objectives for associations receiving support in this field. The French Community emphasises continuing education and vocational training through the Service Francophone des Métiers et des Qualifications. In the German-speaking community the labour office was established by a 2000 decree which oversees employment-related matters. The Labour Office's key responsibilities include implementing re-employment programmes and organising vocational training and further education for job seekers and employees.

The fragmented nature of educational pathways across regions leads to inconsistencies in the quality and availability of programmes. This fragmentation means that access to resources and effective programmes can vary significantly, leading to inequalities in educational outcomes. Another key issue is the lack of a single accreditation and certification framework, which makes it difficult to recognise skills and qualifications across regions and borders. This lack of standardisation undermines the credibility and effectiveness of adult education programs in enhancing employability.

Digital literacy and the integration of digital tools into adult education are increasingly emphasised in national policy in Belgium. The Digital Belgium Plan is a key national strategy, supported by the EU's Digital Education Action Plan (2021-2027), which aims to improve the digital skills of the adult population and ensure that individuals are equipped to participate fully in the digital economy.



Employment policies and successful project at the national level

Belgium has implemented several successful initiatives to support unemployed adult learners in their reskilling and upskilling efforts. A prominent example is Le Forem's "Transition vers l'Emploi" programme in Wallonia. This PES (Public Employment Service) led initiative targets long-term unemployed adults, particularly those whose skills have become obsolete due to technological advances or changes in the labour market. The programme's core feature is its personalised training pathways, which are carefully tailored to each participant's previous experience, current skill set, and future employment aspirations. This ensures that the training provided is not only relevant but also practical, thereby significantly enhancing the employability of the participants. The programme also focuses on addressing labour shortages in critical sectors such as ICT, healthcare, and green jobs. By collaborating with industries facing these shortages, the initiative aligns its training programmes with real market needs, increasing the chances of successful job placement for participants. Financial support is another critical aspect of the programme, covering tuition fees, transport and childcare costs, effectively removing significant barriers that might otherwise prevent individuals from participating.

The success of the "Transition vers l'Emploi" programme lies in its close alignment with market needs and its personalised approach. This has led to high employment rates among participants, with many securing stable jobs within six months of completing the programme. Partnerships with private sector companies also play a key role, ensuring that the skills acquired during the training are directly applicable in the workplace. Since its inception, the programme has successfully trained thousands of unemployed adults, making it a cornerstone of Belgium's efforts to reduce unemployment and boost economic growth.

Bulgaria

Outline of Adult education policy and importance of adult education and employment support

Adult education is key to Bulgaria's economic resilience and social cohesion, linking education, employment, and economic growth. By aligning educational qualifications with market needs and promoting digital and green competencies, Bulgaria is preparing its workforce for the future.



The main sources of publications outlining current Bulgarian government policy are either produced or commissioned by the Ministry of Education and Science (MES), the National Agency for Vocational Education and Training (NAVET), and the Ministry of Labour and Social Policy (MLSP). Key frameworks include:

- The Strategic Framework for Education, Training, and Learning (2021-2030), which aims to improve adult literacy, qualifications, and reintegration into the labour market.
- The National Strategy for Lifelong Learning (2014-2020), which emphasises digital literacy, personal skills development and the validation of informal learning.
- The National Employment Strategy (2021-2030), which highlights digital competences as essential for employment.
- Vocational Education and Training (VET): NAVET's policies emphasise the role of VET in lifelong learning. The NAVET Strategy (2022-2027) includes goals for dual and modular training, integration of workplace and formal education and the promotion of a positive image of VET.

Recognising demographic challenges and a projected decline in the working-age population, Bulgarian policy encourages broad societal participation in lifelong learning. This includes a collaborative approach involving government agencies, training providers, employers and trade unions. Public libraries and community centres play a role in improving free digital and vocational training to underserved groups.

The difficulties encountered are related to inequalities in access to training and the need for skills development. In fact, there are inequalities in training between employees of large companies and SMEs, and between the employed and the unemployed. Additionally, the training for vulnerable groups such as older adults, low-skilled workers and people with disabilities often requires targeted interventions due to their greater vulnerability. Alongside technical skills, Bulgarian policy emphasises the development of personal and key competencies (e.g., communication, problem-solving), which are essential for adaptability in a rapidly changing labour market.



Employment policies and successful project at the national level

The National Employment Agency is currently running about 22 projects at the national level to retrain unemployed people and integrate them into the workforce. Each project typically serves between 800 and 1000 participants and can be renewed on an annual basis. Many focus on specific groups such as young people and older workers.

One of these projects is Knowledge and Skills for Work, launched in 2023 with a broad remit and is open to all the diverse and specific categories of unemployed people such as those registered as unemployed with the Employment Service for more than 6 months, long-term unemployed, young people up to 29 years of age, including those without work experience in a specific field, those with low levels of education or without vocational qualifications and, lastly, those over 50 years of age. The vocational skills on offer are a mix of office-based and manual skills, reflecting the skills required in Bulgaria's increasingly service-based economy, and the training also includes a three-month internship. The project is being delivered through local employment offices and is funded to cover 896 people.

Italy

Outline of Adult education policy and importance of adult education and employment support

Italy's approach to adult education is shaped both by national policy and by alignment with European Union directives.

The legislative reference is Law 92/2012 on Lifelong Learning, which provides the foundation for adult education policy and aims to support the process of continuous learning throughout an individual's life. This law is complemented by the National Plan for Lifelong Learning, which aims to provide educational opportunities for adults of all ages.



Another key element in the field of adult education is the National Guidelines which since 2014 have provided a structured approach, emphasising the importance of basic skills, language training and vocational training. These guidelines are implemented through CPIAs (Provincial Centres for Adult Education), which serve as primary institutions for the delivery of adult education throughout the country. The provision of these courses is crucial since adult education is fundamental to addressing the skills gap and supporting economic growth. As the country faces an ageing population and evolving labour market demands, adult education serves as a vital tool to enhance employability, promote social inclusion and encourage lifelong learning. Accreditation and certification of adult education programmes is one of the challenges facing Italy. There is a lack of uniformity in the recognition of qualifications across regions, which hinders labour mobility and the transferability of skills and makes it difficult to obtain nationally recognised certifications.

Employment policies and successful project at the national level

The Piano Nazionale Giovani, Donne e Lavoro (National Plan for Youth, Women and Work) is an Italian government initiative that aims to improve employment opportunities for young people and women, especially those who are unemployed or underemployed. It is part of Italy's broader strategy to tackle structural unemployment and gender disparities while promoting economic growth and social inclusion. The plan offers targeted training in high-demand sectors such as digital skills, the green economy, and entrepreneurship, tailored to national and regional labour market needs. Financial incentives, such as tax credits and subsidies, are provided to companies that hire programme participants, focusing on reducing inequality and enhancing social mobility for disadvantaged groups.



One more key framework for employment support in Italy is the National Reform Programme (PNR) which, in line with EU policy guidelines, outlines measures to increase employment, with a focus on vulnerable groups. It promotes lifelong learning and continuous updating of skills to meet the needs of the labour market. Italy has implemented several placement programmes aimed at facilitating the entry or re-entry of adults into the workforce. A key initiative is the Garanzia di Occupabilità dei Lavoratori (GOL), which is part of the broader National Recovery and Resilience Plan¹. The GOL programme focuses on personalised employment services, targeting the unemployed and providing them with tailor-made support, including career guidance, training, and internships. This programme is particularly important in addressing the needs of those who have been out of work for an extended period.

Lithuania

Outline of Adult education policy and importance of adult education and employment support

Lithuania has established a comprehensive framework for adult education in line with the principles of lifelong learning and the EU educational strategies. Lithuania's approach to adult education and employment support reveals a comprehensive commitment to lifelong learning and skill enhancement in response to the evolving labour market. The concept of lifelong learning covers formal adult education, non-formal adult education and informal education, which are defined in the Law of Education, the Law on Science and Studies and the Law on Non-formal Adult Education and Continuing Education. The National Digital Decade Plan of the Republic of Lithuania's "Digital Skills and ICT Specialists" section contains a progress measure, 'Create a vocational education system that responds to market needs,' aimed at strengthening digital education in the vocational education system.

The State Digitalization Development Programme of the Ministry of Economy and Innovation of the Republic of Lithuania for 2021–2030 identifies a lack of digital competences in society, which it addresses through the Education Development Programme for 2021–2030.

Opportunities have been created to acquire a profession through apprenticeship and to receive recognition for competencies acquired through non-formal education and self-education.



Employment policies and successful project at the national level

KURSUOK. It is a one-stop digital education platform, where adults are invited to learn and improve their competences in the development of lifelong learning. State funds finance programmes designed to improve adults' digital, literacy, multilingualism, mathematical and natural sciences, technology and engineering competences, personal, social and learning-to-learn competences, citizenship, entrepreneurship, cultural awareness and expression competences. Adults who have chosen these priority programs will have the opportunity to receive a learning basket worth 500 euros. The learning basket is available to working people aged 18–65 who have already acquired a qualification or higher education.

A total of 66 million euros has been allocated for non-formal adult education by 2030. This will enable more than 100,000 people to participate in competence development programmes.

The State Agency for Digital Solutions together with its partners - the "Langas į ateitį" association and the National Martynas Mažvydas Library of Lithuania - is implementing the project "Connected Lithuania: Improving Digital Skills". The project aim is to increase the digital skills of the socially vulnerable and marginalised population, to reduce their digital exclusion, and to develop the ability of the adult population to make full use of the developed digital solutions. It will enable the population to prepare for greater use of e-services, to reduce the digital divide, to encourage the acquisition or improvement of digital skills among people living in remote areas, the elderly, the unemployed, the disabled, and other groups of the population who are still not using digital technologies or whose skills in the effective use of digital technologies are insufficient. Project duration is 28 October 2024 to 30 April 2026.

The total value of the project is over 2 million euros. The project is funded by the Economic Recovery and Resilience Funds "Next Generation Lithuania".

Sweden

Outline of Adult education policy and importance of adult education and employment support

Adult education in Sweden is essential for promoting lifelong learning, enhancing employability and fostering social inclusion. It addresses skills shortages and prepares the workforce for a labour market characterised by technological advances and the transition to a digital economy.



Based on the Education Act (Skollagen), Swedish policy guarantees the right to education for all citizens and gives municipalities responsibility for organising and financing adult education. Lifelong learning is central to Sweden's educational philosophy, supported by national frameworks such as the Swedish Strategy for Lifelong Learning and the Skills Supply Strategy. By promoting modular learning, micro-credentials, and collaboration between educators and employers, these initiatives enable individuals to adapt to societal and economic changes. A strong focus on digital literacy and technology integration defines Sweden's approach to adult education. The national curriculum includes standards for digital literacy to ensure that adults acquire skills that are essential in a digital society. The Digital Strategy for Schools and Adult Education aims to equip learners with digital tools and online resources, and to promote flexible learning through platforms and online courses. Initiatives such as DigCompEdu support teachers in adopting digital teaching methods, while targeted digital literacy programmes aim to bridge skills gaps, especially among older adults and immigrants.

Sweden's commitment to digital resources, teacher training, and inclusive practices equips adults for a knowledge-based economy in an era marked by rapid technological advancement and evolving work dynamics. The growing emphasis on green technologies, AI-driven automation, and the global shift towards sustainable economies highlights the importance of Sweden's adaptable system. By providing accessible, high-quality learning tailored to the demands of an evolving labour market, Sweden positions itself as a leader in preparing adults for future challenges. Continued investment in digital infrastructure, such as 5G connectivity and AI-powered educational platforms, reflects a forward-looking approach to making lifelong learning accessible to all, fostering resilience in a world increasingly shaped by digital transformation and environmental imperatives.

Despite a strong framework, challenges remain in the Swedish adult education system. A significant gap is the uneven access to accredited programmes, especially in rural and underserved areas. Accreditation and certification processes vary between municipalities, leading to disparities in programme quality and recognition. Additionally, fragmented coordination between local and national authorities makes it difficult to implement a coherent strategy for adult learning. The rapid pace of technological change requires continuous adaptation of education and training programmes, but updating curricula and ensuring that teachers have the necessary digital skills remains a challenge.



Employment policies and successful project at the national level

Sweden has implemented several successful initiatives at the national level to support unemployed adult learners, in particular through government funds and official financial programmes that facilitate reskilling and upskilling. These projects are in line with Sweden's broader strategy to foster lifelong learning, adapt to technological change and promote inclusive labour market participation.

The Knowledge Boost Initiative (Kunskapslyftet) is a major government-funded programme launched to expand educational opportunities for adults. It focuses on providing access to municipal adult education (Komvux) and vocational training for unemployed people wishing to acquire new skills. This initiative aims to address skills gaps in the labour market by enabling adults to obtain relevant training in high-demand sectors, such as healthcare, technology, and construction. A key aspect of Kunskapslyftet is the flexibility it offers: learners can follow courses part-time or full-time, with options for online and in-person training.

This initiative has been largely successful in reducing unemployment rates and improving employability of participants. A particular strength of the programme is its emphasis on practical skills development, which has led to a better match between education and labour market needs. The government provides targeted financial support, such as grants and loans, to cover tuition fees, study materials, and living expenses for participants, thereby lowering barriers to entry for marginalised groups. This funding has allowed the programme to reach a wide demographic, from young adults to older workers who need to re-skill due to technological changes.



Learning from experience

This section is built on the extensive piloting reports that each partner produced as a part of WP3, and provides a short description of the methods, challenges and results observed during implementation. For further information, comprehensive reports are available for each implementing country, providing a broader perspective on the piloting process and its results.

Results of Piloting Activities

The Digibreakers + Piloting programme was conducted in four European Countries – Bulgaria, Belgium, Italy and Sweden – with the aim of testing learning tools developed by the project consortium to increase employability among unemployed adults. The purpose of these tools focused on digital and green skills, with the purpose of helping participants adapt to the modern labour market and embed these skills into their different needs. This section is a summary of how the pilot activities were conducted in the four implementing countries. Each pilot adapted the DB+ learning tools to their specific national context and participants' needs, ensuring relevance and accessibility for diverse groups such as long-term unemployed individuals, migrants and adults with limited digital skills. Reaching migrants became a significant added value to DB+ as this group was not initially foreseen in the project application and, equipping them with digital skills served as an enabler to promote social inclusion, in addition to enhancing their employability.

The core goals of the pilot programme in every country were to improve digital literacy, introduce green skills applicable to the workforce, actively engage participants and refine the learning materials based on feedback. These objectives were pursued through designed activities differentiated for each country. For example, Bulgaria's pilot focused on providing practical digital skills for older adults covering essentials like CV creation and job portal navigation and these activities were held in regions with high unemployment. Belgium and Italy emphasised boosting employability for different participants, including career counsellors and adult education providers, while Sweden prioritised supporting migrant job-seekers to overcome digital literacy barriers and navigate the local labour market.



The recruitment process for each pilot varied to target the most suitable audience in each region. A broader reach and rapid recruitment were enabled by social media outreach, especially among younger adults, while job centre partnerships helped reach those most in need of training. Although the reliance on digital recruitment did create challenges for digitally under-skilled adults, it is important to underline that the recruitment of participants was also done through the distribution of leaflets at libraries and other physical spaces. Participants were carefully selected to ensure diverse representations across age, gender and educational backgrounds.

The timeline and structure of each pilot were adapted to local needs, with each program moving from orientation and preparation to active learner-centred sessions and evaluation. Bulgaria held an intensive 7 to 14 day programme that blended face-to-face and online learning, making it effective for quick and focused interventions. Belgium, Sweden and Italy spread the programme over several months, allowing for a formative assessment with ongoing feedback and adaptation. Sweden's lower pace permitted for additional coaching for migrants with limited digital experience, focusing on step-by-step skill-building.

The engagement strategies included culturally adapted examples, group discussion and interactive sessions, all of them designed to maximise learning outcomes. In Sweden, for instance, migrants were helped with culturally relevant job-seeking workshops to connect them with the content. In Italy, participants were encouraged to engage in self-assessment and peer learning using group projects and quizzes. Bulgaria's use of the Viber platform enabled remote support, allowing participants to ask questions outside the formal session and helping to build a sense of community among them.

Pre- and post-evaluations surveys, focus groups and real-time feedback were employed to measure the effectiveness of DB+ learning materials, providing valuable insight on content adjustment requirements. In fact, real-time feedback was used to make immediate changes, while post-programme surveys were used to evaluate overall satisfaction and improvement. Participants' feedback was generally positive, but some indicated a need for further support with complex or unfamiliar topics, particularly around green skills, which highlights an opportunity for further refinement. Additionally, across the pilot activities, common challenges emerged such as varied digital skill levels, language barriers and limited familiarity with green skills among older adults and migrants.



Deepening understanding and challenges

This section is a comprehensive analysis of the implementation phase, deepening understanding of the weak points and best practices to highlight based on the actionable recommendations from the piloting phase. Based on participants' feedback, some limitations arose from the course topics and the way they were addressed in the teaching materials: survey results but also immediate feedback underlined that there were varied levels of knowledge of the course topics. Different levels of digital literacy and green awareness need an approach that can be suitable for diverse groups of participants. To ensure inclusivity and good learning outcomes, implementors stressed the need to provide training with practical and real-world examples, focusing more on green skills and linking these skills to participants' daily lives. In addition, for future opportunities, the programme would benefit from more sessions where participants can be divided into levels, thus having a more homogeneous level of awareness of such knowledge. Moreover, the timetables were structured in different ways for each of the pilot activities carried out in the different countries. In line with the pilot reports, both long and short duration courses were conducted. In the first case, timelines were spanned over several months, allowing for preparation, orientation, laboratory sessions and evaluation. Feedback was regularly gathered through surveys and interviews. In addition, participant involvement was supported by using interactive engagement methods such as quizzes, self-assessment and group activities. In the second case, the structure of the timetable did not take place beyond the two week timeframe. Rooted more in a coaching approach rather than traditional lessons, the shorter pilot activities focused on the self-paced online course, followed by face-to-face sessions and interactive workshops. Trainer support was provided both online and remotely, enabled by the use of additional digital tools (Viber). The timetable differentiation can provide a broader and more comprehensive understanding of the use of the DB+ learning materials because the flexibility of the timetables in the different pilots means that the learning materials can be adapted to diverse teaching methods, learning pathways and contexts. In both cases, short and long-term, the common strategy applied was a learner-centred approach that ensured effective learning outcomes independently from the duration of the course.



A learner-centred approach is linked to the engagement of participants and to the provision of resources, both of which are key issues that were addressed during the pilots. In light of the different age groups and socio-cultural backgrounds of the participants, diverse strategies were adopted during the pilot activities to personalise teaching practices to meet participants' specific and real needs and to ensure their engagement. For instance, regular feedback mechanisms were implemented to help maintain a high level of participation, and trainers steered the focus towards using relatable examples to encourage community support; an inclusive learning pathway is understood to rely on personalisation and adaptation to suit different participant profiles, guided by trainers.

In relation to inclusion, the provision of resources is a crucial aspect to be addressed, when it comes to the adoption of digital tools in the learning process, both in terms of the digital tools provided (such as internet access, laptops, tablets, smartphones etc.) and the methods by which they are made accessible, whether through availability at learning centres or financial support to obtain them. Without ensuring adequate resource provision, there is a significant risk of excluding individuals with limited financial or poor resources. When the provision of digital tools cannot be guaranteed, the adaptability of digital teaching materials must be a concern: as shown in the implementation of the pilot activities, the most commonly used device for accessing digital learning materials was a smartphone. Therefore, it is pivotal to ensure mobile compatibility for easy access to learning materials and to have a public space with Internet access where the learning sessions can be held.

Lastly, it is important to stress the centrality of the recruiting process and training trainers, considering their primary role in implementing the DB+ methodology. In order to be delivered efficiently, trainers, educators and counselors must be equipped with digital proficiency and be familiar with green awareness topics. Adaptability and strong communication skills are also essential, together with experience in the adult education sector. The training for trainers needs to examine cultural sensitivity aspects and teaching strategies to increase participant engagement and adaptability. Additionally, it should outline the structure of the DB+ course, enabling trainers to customise the teaching materials to meet participants' needs. Lastly, training for trainers should emphasise the adaptability of teaching methods to different learning styles.



The DB+ pilot activities highlighted both challenges and successes in implementing the methodology. The most relevant limitations included inconsistencies in participants' levels of knowledge, limited resource provision and varied engagement due to differing timetables and teaching approaches. To address these issues some standardised key elements are required, such as digital tool provision and content tailored to different groups of participants, while maintaining flexibility for local adaptation. Good practices have been brought out such as learner-centered approaches and formative assessment through regular feedback mechanisms; these elements have proved effective and should guide future improvement. In conclusion, some critical aspects to focus on are comprehensive preparation for trainers and equitable access to digital tools, which will increase inclusivity, engagement and overall impact to significantly improve the employability and digital literacy of diverse groups.



Policy Recommendations

Formulated on the findings of the DB+ pilot activities across Bulgaria, Belgium, Italy and Sweden, the EU Adult Education Policy framework and the National Contributions of each implementing country partner, the following Policy Recommendations are proposed to support the integration of digital literacy and green awareness in adult education, to improve access and inclusion, and to reinforce the overall employability of adults in the fast evolving labour markets.

- **Prioritise adjustable and modular education pathways**

An adult learning model that offers modular and flexible learning pathways allows adults with different backgrounds and time commitments to progress at their own pace. Programmes should be designed to accommodate part-time and full-time options, include blended learning, and provide specific modules focusing on essential skills. It is also important to use learner-centred teaching approaches, which help to keep participants active while learning.

- **Integrate digital and green competencies in curriculum with enhanced infrastructure support**

To effectively integrate digital and green skills into adult education programmes, alignment with National and EU goals for sustainability and digital transformation should be ensured. This requires the integration of the DigiComp and GreenComp frameworks, which provide structured guidance to promote digital literacy and sustainability practices across occupational sectors. To support this integration, policies should also increase investment in essential infrastructure, such as digital learning platforms, green technology training resources and accessible online support tools. Funding should prioritise accessibility, including mobile compatibility and technical support, while encouraging public access points, such as community centres and libraries, to provide equipment and internet access to learners who may not have these resources at home, thus promoting digital inclusion.

- **Strengthen support system and recruitment strategies for inclusive adult education**



Career guidance counsellors and educators have a crucial role to play in providing tailored guidance and support, especially to vulnerable groups such as migrants, low-skilled workers and long-term unemployed individuals. Therefore, their active involvement should be encouraged, as should the training of counsellors in digital and green skills, to enable them to help adult learners to link their education with real employment opportunities. Further, for a supportive learning environment that addresses individuals' needs while maximising participation among underserved populations, diverse outreach methods should be leveraged to recruit unemployed people, including social media campaigns, collaborations with job centres and partnerships with community organisations.

- **Ensure comprehensive financial support for adult education participation**

Priority should be given to financial support mechanisms that address common barriers to participation in adult learning, such as tuition fees, transport costs and childcare expenses. By removing these financial barriers, programmes can ensure wider access for individuals from underserved and vulnerable groups, including low-income adults, single parents and those living in remote areas. Funding frameworks should include grants, subsidies or reimbursements that are tailored to the specific needs of participants.

- **Establish a unified accreditation and certification framework**

A single framework for accreditation and certification of adult learning programmes should be developed and implemented to ensure consistency, transparency and recognition of qualifications across regions and sectors. This framework should standardise the validation of skills acquired through formal, non-formal and informal learning pathways, facilitating labour mobility and improving employability. By aligning with EU standards, such a framework would enhance the credibility of adult learning programmes, making qualifications transferable and widely recognised by employers. In addition, the framework should include mechanisms for continuous review and updating to remain relevant to evolving labour market needs.



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